B) Amendments to the Specification:

1. **Amend page 10 as follows:**

folds or corrugations of the corrugated segment remain in the lengthened and separated or spread apart position until a force is used to compress or collapse together the folds or corrugations of the corrugated segment. That is, it is not necessary for the individual pulling the plunger handle member and lengthening the corrugated segment to hold the plunger handle member or corrugated segment such that the corrugated segment remains in its lengthened position. The corrugated segment is designed and manufactured such that it does not automatically recoil. This design avoids automatic recoil action and maintains the ~~plunger member~~ corrugated segment in the desired lengthened position when drawing medications or other fluids into the syringe barrel. An automatic recoil would force the fluids out of the syringe barrel. An axial force must be applied to the syringe barrel along its longitudinal axis to cause the elongated corrugated segment walls to move toward each other such that the syringe barrel shortens along its longitudinal axis. When the walls of the corrugated segment are forced together, the syringe barrel shortens. Shortening of the corrugated segment can be performed by pressing against the rearward face surface of the plunger shaft handle member in a direction along the axial length of the syringe barrel to cause the corrugated segment to shorten and the plunger piston to slide along the internal side wall surfaces of the syringe barrel cavity toward the forward end and syringe entrance/exit port such that the medication in the syringe barrel cavity is ejected from the syringe through the entrance/exit port. Note that the plunger shaft remains housed within the syringe barrel during operation and non-operation. An advantage of using the straight segment and corrugated segment syringe barrel is the protection provided to the plunger shaft and the internal cavity wall surfaces in that contaminants deposited onto the external wall surfaces of the straight and corrugated

2. **Amend page 38 as follows:**

it is not necessary for an individual to hold the withdrawn plunger 103 or lengthened corrugated sheath 107 such that it remains in its withdrawn and lengthened state, respectively. The corrugated sheath 107 is designed and manufactured such that it does not automatically recoil to its compressed or shortened state after being elongated. A force must be applied along the longitudinal axis of the syringe to cause the elongated corrugated walls 107W to be moved toward each other such that the corrugated sheath 107 compresses and shortens. When the walls 107W of the corrugated sheath 107 are forced together, the sheath 107 shortens. Shortening of the corrugated sheath 107 can be performed by applying pressure to the rearward end face surface 108RF of the plunger handle member 108 in the direction toward the rearward end opening 101RO of the syringe barrel 101 to cause the sheath to shorten and the plunger shaft 103 and the piston 104P to traverse the syringe barrel cavity 102 toward the tapered internal wall 101TIW surfaces of the syringe cavity 102 and the syringe entrance/exit port 101EP or forward end opening 101FO. The piston rim 104PR slidably engages and maintains a tight seal with the internal wall surfaces 101IW of the syringe barrel cavity 102 as the piston 104P advances. Liquid medication in the cavity 102 remains forward of the piston head 104HP during advancement of the plunger 103 and piston 104P such that the medication in the syringe barrel cavity 102 is ejected from the syringe cavity 102 through the entrance/exit port 101EP or forward end opening 101FO. An advantage of using the corrugated sheath 107 is the protection provided by the sheath 107 to the plunger shaft 103 and the internal cavity wall surfaces 101IW of the syringe barrel 101 in that contaminants deposited onto the external wall surface 107EW of the corrugated sheath 107 or the external wall surface 101EW of the syringe barrel 101 will not jeopardize the sterility of the inner cavity 102

3. **Amend page 41 as follows:**

201 as the plunger handle member 204 is pulled thereby lengthening the syringe barrel 201 along its longitudinal axis, as shown in FIGURE 4. At least a portion of the plunger shaft 205 remains centrally located within, and the rim ~~204PR~~ 205PR of the piston ~~204~~ 205P remains in contact with, the internal wall surfaces 201IW of the hollow or cavity 207 of the syringe barrel straight segment 202 during elongation or lengthening of the syringe barrel 201. The rearward end terminus 205RT of the plunger shaft 205 and the syringe barrel rearward end terminus 201RT of the corrugated segment 203 remain molded to the forward end face surface 204FF of the plunger handle member 204. As the corrugations or folds of the corrugated segment 203 are caused to separate, the corrugated segment 203 of the syringe barrel 201 lengthens causing the forward portion of the plunger shaft 205FP to traverse the straight segment 202 of the syringe barrel cavity 207, and the plunger piston 205P attached to the forward end terminus 205FT of the plunger shaft 205 to slide along the straight segment 202 of the syringe barrel cavity 207 in the direction of the corrugated segment 203. This is because the rearward end terminus 205RT of the plunger shaft 205 is centrally molded to the forward face surface 204FF of the plunger handle member 204 which moves in a direction away from the straight segment 202 of the syringe barrel 201 during lengthening causing the plunger 205 and piston 205P to traverse the syringe barrel cavity 207 toward the corrugated segment 203. The plunger piston 205P is in contact and forms a seal with the internal cavity walls 201IW of the syringe barrel 201. The corrugated segment 203 encloses or encircles a greater length of the plunger shaft body 205 as the plunger is drawn further along the syringe barrel hollow or cavity 207, as shown in FIGURE 4. The corrugated segment 203 remains in the lengthened or elongated state until a force is used to compress or collapse together the

4. **Amend page 43 as follows:**

straight segment 202 and away from the tapered internal walls 201TIW of the syringe barrel cavity 207 and toward the corrugated segment 203. As the plunger piston 205P traverses the syringe barrel cavity 207, the plunger piston rim 205PR slidably engages and maintains a tight seal with the internal wall surfaces 201IW of the syringe barrel cavity 207. This causes the air column in the bore or cavity 207 located behind the plunger piston 205P and adjacent the body of the plunger shaft 205 to be pushed into the elongated corrugated segment 203 of the syringe barrel 201. A vacuum is created in the space located between the forward end of the piston head 205HP and the tapered internal wall surface 201TIW of the syringe barrel 201 as the piston head 205HP is pulled away from the tapered internal walls 201TIW. The vacuum created causes the liquid medication in the vial to be drawn into the syringe barrel cavity 207 through the needle 208, which is frictionally attached to the outer walls of the reduced diameter neck 201RDN, and the entrance/exit port 201EP. The needle 208 is then removed from the medication vial and positioned in the needle port of an appropriate bag or bottle of intravenous solution. The liquid medication is then injected into the bag or bottle of intravenous solution. The reduced diameter neck 201RDN is manufactured or molded to operate with any existing line of hypodermic needles, tubing, or caps or closures.

An advantage of using the syringe 200 having a corrugated segment 203 and a straight segment 202 is the protection provided to the plunger shaft 205 and the internal cavity wall surfaces 201IW in that contaminants deposited onto the external wall surfaces of the syringe barrel 201EW will not jeopardize the sterility of the inner cavity 207 of the syringe barrel 201 because the contaminants cannot penetrate the walls 201W of the syringe barrel 201. It is also noted that the peaks, pleats, valleys, and walls of the

5. **Amend page 53 as follows:**

syringe barrel 401OB, respectively, such that the concentric walls 402W of the plunger member 402 slide out of the glide space 406/GS. Simultaneously, the piston rim 404PR of the piston 404P, attached at the forward end terminus 404FT of the plunger shaft 404, slidably engages and maintains a tight seal with the internal wall surfaces 401IBIW of the inner syringe barrel 401IB while moving along the inner syringe barrel cavity 401C and away from the tapered internal wall 401TIW of the inner syringe barrel 401IB. This causes the air column in the bore or cavity 401C located behind the piston 404P and adjacent the plunger shaft 404 to be pushed out of the syringe cavity 401C creating a vacuum in the space located between the forward end of the piston head 404HP and the tapered internal wall surfaces 401TIW of the inner syringe barrel cavity 401C. The vacuum causes the liquid medication in the vial or ampoule to be drawn into the inner syringe barrel cavity 401C through the needle 405, hub 405H, and entrance/exit port 401EP. The needle 405 is then removed from the medication vial or ampoule and positioned in a needle port of an appropriate bag or bottle of intravenous solution. The liquid medication can then be injected into the bag or bottle of intravenous solution by applying pressure to the rearward face surface 403RF of the flat bottom floor structure 403. This pressure causes the longitudinal length of the plunger shaft 404 and the plunger piston 404P to advance within and along the inner syringe barrel cavity 401C toward the tapered internal wall surfaces 401TIW of the syringe cavity 401C. The piston rim 404PR slidably engages and maintains a tight seal with the internal wall surfaces of the inner barrel 401IBIW of the syringe cavity 401C as the piston 404P and plunger shaft 404 advance. The liquid medication remains forward of the piston head 404HP in the space located between the forward end of the piston head 404HP and the tapered internal

6. **Amend page 59 as follows:**

syringe barrel 502 has a plunger shaft cross-sectional opening as described above and the forward end terminus of the syringe barrel 502 has a small diameter opening 502FO. The small diameter opening 502FO has a reduced diameter neck 502RDN having tapered internal walls forming the entrance/exit port for the syringe cavity 502C. The needle hub 505H of a needle 505 is attached to the reduced diameter neck 502RDN of the syringe 500. In operation, the plunger shaft 501 is withdrawn from the syringe barrel cavity 502C by grasping the outer syringe barrel surface 502OW with one hand and the plunger shaft handle member 504 with the other hand and pulling the plunger shaft handle member 504 such that the plunger shaft 501 emerges from the hollow or cavity 502C of the syringe barrel 502 through the rearward end plunger shaft cross-sectional opening formed in the contaminant shield 510 or 520 exposing the plunger shaft 501 to the external environment. During withdrawal, the piston 501P at the forward end terminus 501FT of the plunger shaft 501 slidably engages and maintains a tight seal with the internal wall surfaces 502IW of the syringe barrel cavity 502C while moving along the syringe barrel cavity 502C and away from the tapered internal walls 502TIW of the syringe barrel 502. This causes the air column in the syringe bore or cavity 502C behind the piston ~~head~~ 501P and adjacent the plunger shaft 501 to be expelled or pushed out of the syringe cavity 502C through the plunger shaft cross-sectional opening creating a vacuum in the space located between the forward end of the piston head 501HP and the internal tapered wall surfaces 502TIW of the syringe barrel ~~501~~502. The plunger shaft 501 remains in a withdrawn position until a force is applied along the longitudinal axis of the plunger shaft 501 in a direction toward the forward end terminus 501FT of the plunger shaft 501 to cause the plunger shaft 501 to pass through the plunger shaft cross-sectional

7. **Amend page 61 as follows:**

exposed portion of the plunger shaft 501, in a direction away from the forward end of the plunger shaft 501FT and ultimately restricting them from entering the syringe barrel cavity 502C by way of the plunger shaft 501. The contaminant shield 510 or 520 also functions to prevent deposition of dirt, lint, viral components, bacteria, germs, dust, microorganisms, pathogens, paper fibers, and any other type of contaminant carried by the air, hands, fingers, gloves, etc., from falling into the rearward end opening 502RO of the syringe barrel 502 and becoming deposited onto the internal wall surfaces 502IW of the syringe barrel cavity 502C. The contaminant shield 510 or 520 of the instant invention provides protection to the plunger shaft 501 and the internal cavity wall surfaces 502IW of the syringe barrel 502 in that contaminants deposited onto the outer surfaces 508RF and 506RF or the environmentally exposed surfaces of the second part 507 of the contaminant shield 510 or 520 will not jeopardize the sterility of the inner cavity 502C of the syringe barrel 502 holding the medication, solution, or other fluids, etc., because the contaminants cannot penetrate rearward face surfaces 506RF or 508RF of the contaminant shields 510 and 520, respectively. It is noted that the handle member 503 of syringe barrel 530 can also be provided with an extension forming a tab, knob, or handle 503T that functions as a wall for leverage to assist the user in drawing the plunger shaft 501 from the syringe cavity 502C.

As an alternative to forming or molding the contaminant shield 510 and 520 onto the inner wall surface 502IW of the syringe barrel 502, the contaminant shield 620, as shown in FIGURE 12, can be formed separately from the syringe barrel 600 and attached in a separate operation. Syringe barrel 600 has an outer wall surface 602OW and an inner wall surface 602IW. For example, the contaminant shield 620 could be formed with a

8. Amend page 62 as follows:

male wall 607 extending perpendicularly from the forward face surface 606FF of the contaminant shield 620 with the outer surface of the male wall 607 having threads and/or grooves 608T which mate with threads and/or grooves 605TG, formed on the inner wall surfaces 602IW at or near the rearward end opening 602RO of the syringe barrel 600, by screwing, turning, twisting, or rotating the threaded and/or grooved end cap contaminant shield 620 with the threads and/or grooves 605TG on the syringe barrel 600 inner wall surface 602IW. The contaminant shield also has a rearward end face 606RF that faces the forward face surface 612 of plunger handle member 630. As an alternative, the threads and/or grooves can be formed in the extending male walls 607 of the end cap contaminant shield 620 and the threads and/or grooves 608T formed on the inner wall surfaces 602IW at the rearward end opening 602RO of the syringe barrel 600. FIGURE 12 shows the plunger shaft 604PS positioned within the syringe barrel cavity 602C. The piston 604P is attached by mounting, fusing, molding, adhesives, ultrasonic bonding or welding, thermal bonding, etc., on the forward end terminus of the plunger shaft 604FT. The piston 604P has a rim 604R and a piston head 604HP. The plunger shaft 604PS has plunger shaft ribs 604PSR. The rearward terminus 604RT of the plunger shaft 604PS extends out of the rearward opening 602RO of the syringe barrel cavity 602C. One method of manufacture includes separately molding the end cap contaminant shield 620, syringe barrel 600, plunger handle member 630, and plunger shaft 604PS and piston 604P. The next steps involve assembling the syringe components. The rearward terminus 604RT of the plunger shaft 604PS is threaded through the cavity or hollow formed by the walls 607 extending from the forward face surface 606FF of the end cap contaminant shield 620 and then through the cross-sectional opening 610CSO. Upon threading of the plunger

9. Amend page 65 as follows:

contaminant shield structure having all of the components of end cap contaminant shield structure 620 except for the extending walls 607 and threads and/or grooves 608T. The contaminant shield member 650 has a forward face surface 606FF and a rearward face surface 606RF. After molding of the contaminant shield 650, the forward face surface 606FF is bound or attached to the rearward end terminus 602RT of syringe barrel 600 by mounting, fusing, molding, adhesives, ultrasonic bonding or welding, thermal bonding, etc. The contaminant shield member 650 is formed of a first part material 606, which can be the same or different from the material used to form the syringe 600, and a second part material 609 having a flexible characteristic. The second part material 609 is molded to the periphery of the opening formed in the contaminant shield walls 606RF and 606FF to form a cross-sectional opening 610CSO having the cross-sectional shape of the plunger shaft 604PS. The contaminant shield member 650 is threaded over the plunger shaft 604PS prior to attachment by molding, bonding as by adhesives, ultrasonic bonding or welding, thermal bonding, etc., of the forward face surface 606FF of contaminant shield member 650 to the rearward end terminus 602RT of syringe barrel 600. The plunger handle member 630 can be molded, formed, or attached to the rearward end terminus 604RT of the plunger shaft 604PS prior to or following attachment or bonding of contaminant shield member 650 to the rearward end terminus 602RT.

An advantage of using the contaminant shield designs of the fifth embodiment is the protection provided by the shield to the internal cavity wall surfaces of the syringe in that contaminants deposited onto the rearward end wall surfaces of the shield will not jeopardize the sterility of the inner cavity of the syringe barrel because the contaminants cannot penetrate the shield.

10. Amend page 66 as follows:

An added function and benefit of the fifth embodiment is that the shield functions to prevent accidental separation of the plunger member from the syringe barrel by abutment of the forward face surface of the shield or the extended wall of the end cap with the forward end terminus of the plunger shaft. Second, the shield functions as a temporary dam or barrier to fluids that may escape the syringe cavity due to piston failure.

A11

Conclusion

Accordingly, the reader will see that the syringes of the instant invention can be used for accomplishing many tasks requiring the use of a syringe. Because of the design of the syringes of the instant invention, entry of contaminants such as dirt, dust, microorganisms, pathogens, and any other type of contaminants, carried by air, hands, fingers, gloves, etc., which may become deposited onto the internal surfaces of the syringe barrel cavity, is discouraged. Additionally, using the syringes of the instant invention provides protection to the plunger shaft and the internal cavity wall surfaces in that contaminants deposited onto the external wall surfaces of the syringe barrel will not jeopardize the sterility of the inner cavity of the syringe barrel holding the medication, solutions, etc., or other fluid because the contaminants cannot penetrate the walls of the syringe barrel, the seals, the corrugated sheath, or the shield walls.

A12

The syringes of the instant invention can be disposable or be reusable following an acceptable sterilization process.

The syringe barrels, plungers, plunger shafts, pistons, syringe caps, etc., of the instant invention can also have any desired geometrical and/or cross-sectional shape such as cylindrical, triangular, square, hexagonal, octagonal, etc.